

## **REVISED SAIC TERRESTRIAL SPECIES GOALS AND OBJECTIVES Working Draft<sup>1</sup>**

### **Introduction**

This handout presents draft biological goals and objectives for the proposed terrestrial covered species that have been revised based on comments received to the preliminary draft biological goals and objectives presented to the Working Group on February 10, 2009 and additional comments received on the March 2<sup>nd</sup> draft discussed at that meeting.

As identified in the BDCP Overview dated January 12, 2009 and other planning documents, the BDCP Steering Committee anticipates that implementation of BDCP proposed covered activities and conservation measures will affect certain terrestrial species and their habitats, and that the BDCP Conservation Strategy will therefore need to address these unavoidable effects. At the direction of the Steering Committee, SAIC has been pursuing the following approach for terrestrial species:

- a. identify the terrestrial species or habitats that may be affected by the proposed BDCP;
- b. identify the biological goals and objectives that may be appropriate for these affected terrestrial species;
- c. identify (by working through the individual substantive workgroups, like habitat and other stressors) the potential conservation measures that may be appropriate to implement for these species and their habitats to meet the relevant goals and objectives;
- d. identify opportunities to work with existing HCP/NCCP plans in these same geographic areas that may already have programs that might be relevant, and pursue discussions with those entities about these opportunities for further collaboration.

The revised biological goals and objectives presented below are intended to be crafted such that implementation of conservation measures that will achieve the objectives will provide for coverage of all the terrestrial covered species under the Natural Community Conservation Planning Act (NCCPA). Coverage is anticipated to be primarily provided through conservation of sufficient covered species habitats through proposed BDCP physical habitat restoration actions, undertaken in conjunction with the conservation actions under approved and planned HCP/NCCPs that intersect the BDCP Planning Area and Suisun Marsh. If it develops that the BDCP terrestrial conservation measures may not be suited to the conservation standards under the NCCPA for particular terrestrial

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<sup>1</sup> This draft is based upon the March 2, 2009 handout to the Workgroup, as modified by editorial comments shared amongst workgroup members subsequent to the meeting. It remains a “work in progress.”

species that will be affected by the plan, the BDCP plan participants may seek incidental take authorizations for those species under the California Endangered Species Act.

## Terrestrial Covered Species Goals and Objectives

### Salt Marsh Harvest Mouse

**Goal SMHM1:** Preserve and protect the abundance and distribution of salt marsh harvest mouse and provide sufficient habitat to support the abundance and distribution of its populations in Suisun Marsh and the Planning Area to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.4.

**Objective SMHM1.1:** Increase the extent of tidal salt marsh harvest mouse habitat within Suisun Marsh.

**Objective SMHM1.2:** Restore tidal marsh in portions of the Planning Area that may support salt marsh harvest mouse habitat in future years with sea level rise.

**Objective SMHM1.3:** Avoid mortality of salt marsh harvest mouse associated with implementation of covered activities and conservation measures<sup>2</sup>.

### Suisun Shrew

**Goal SUSH1:** Provide sufficient habitat to support the abundance and distribution of Suisun shrew populations in Suisun Marsh and the Planning Area to contribute to the conservation of the Suisun shrew in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.4.

**Objective SUSH1.1:** Increase the extent of tidal Suisun shrew habitat within Suisun Marsh.

**Objective SUSH1.2:** Restore tidal marsh in portions of the Planning Area that may support Suisun shrew habitat in future years with sea level rise.

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<sup>2</sup> The salt marsh harvest mouse is a designated fully protected species under the California Fish and Code § 4700. Take as defined in California Fish and Game Code §86 of fully protected species is prohibited. Conservation measures to achieve this objective would avoid take of the species in accordance with California Fish and Game Code § 4700.

**Goal RIBR1:** Preserve and protect the abundance and distribution of riparian brush rabbit and increase the extent of its habitat to contribute to conservation of its populations in the Planning Area.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.5.

**Objective RIBR1.1:** Increase the extent of riparian brush rabbit habitat near occupied habitats within the Planning Area.

**Objective RIBR1.2:** Avoid mortality of riparian brush rabbit and removal or degradation of occupied habitat associated with implementation of covered activities and conservation measures.<sup>3</sup>

## Swainson's Hawk

**Goal SWHA1:** Provide sufficient habitat to support the abundance and distribution of Swainson's hawk in the Planning Area to contribute to its conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2, NACO1.3, and NACO1.5.

**Objective SWHA1.1:** Increase the extent of Swainson's hawk nesting habitat within the Planning Area that is located within  miles of Swainson's hawk foraging habitat.

**Objective SWHA1.2:** Maintain or increase the extent of protected Swainson's hawk foraging habitat within the Planning Area.

## California Clapper Rail

**Goal CLRA1:** Preserve and protect the abundance and distribution of California clapper rail and provide sufficient habitat to support the abundance and distribution of its populations in Suisun Marsh and the Planning Area to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.4.

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<sup>3</sup> The riparian brush rabbit is extremely rare and is known to occupy only two small habitat areas, one of which is in the Planning Area.

**Objective CLRA1.1:** Increase the extent of tidal California clapper rail habitat within Suisun Marsh.

**Objective CLRA1.2:** Restore tidal marsh in portions of the Planning Area that may support California clapper rail habitat in future years with sea level rise.

**Objective CLRA1.3:** Avoid mortality of California clapper rail associated with implementation of covered activities and conservation measures<sup>4</sup>.

## California Black Rail

**Goal BLRA1:** Preserve and protect the abundance and distribution of California black rail and provide sufficient habitat to support the abundance and distribution of its populations in Suisun Marsh and the Planning Area to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.4.

**Objective BLRA1.1:** Increase the extent of tidal California black rail habitat within the Planning Area and Suisun Marsh.

**Objective BLRA 1.2:** Avoid mortality of California black rail associated with implementation of covered activities and conservation measures<sup>5</sup>.

## Greater Sandhill Crane

**Goal SACR1:** Preserve and protect the abundance and distribution of greater sandhill crane and provide sufficient habitat to support the abundance and distribution of greater sandhill cranes that winter within the Planning Area to contribute to its conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3.

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<sup>4</sup> The California clapper rail is a designated fully protected species under the California Fish and Code § 4700. Take as defined in California Fish and Game Code §86 of fully protected species is prohibited. Conservation measures to achieve this objective would avoid take of the species in accordance with California Fish and Game Code § 4700.

<sup>5</sup> The California black rail is a designated fully protected species under the California Fish and Code § 4700. Take as defined in California Fish and Game Code §86 of fully protected species is prohibited. Conservation measures to achieve this objective would avoid take of the species in accordance with California Fish and Game Code § 4700.

**Objective SACR1.1:** Maintain or increase the extent of protected greater sandhill crane roosting habitat within the Planning Area.

**Objective SACR1.2:** Maintain or increase the extent of protected greater sandhill crane foraging habitat within the Planning Area.

**Objective SACR1.3:** Avoid mortality of greater sandhill crane associated with implementation of covered activities and conservation measures<sup>6</sup>.

## Western Burrowing Owl

**Goal BUOW1:** Provide sufficient habitat to support the abundance and distribution of western burrowing owl in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3-1.4.

**Objective BUOW1.1:** Maintain or increase the extent of protected western burrowing owl foraging and breeding habitat within the Planning Area and Suisun Marsh.

## Tricolored Blackbird

**Goal TRBB1:** Provide sufficient habitat to support the abundance and distribution of tricolored blackbird in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3-1.4 and NACO1.5.

**Objective TRBB1.1:** Increase the extent of tricolored blackbird nesting habitat within the Planning Area and Suisun..

**Objective TRBB1.2:** Maintain or increase the extent of protected tricolored blackbird foraging and nesting habitat within the Planning Area and Suisun Marsh.

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<sup>6</sup> The greater sandhill crane is a designated fully protected species under the California Fish and Code § 4700. Take as defined in California Fish and Game Code §86 of fully protected species is prohibited. Conservation measures to achieve this objective would avoid take of the species in accordance with California Fish and Game Code § 4700.

## Yellow-breasted Chat

**Goal YBCH1:** Provide sufficient habitat to support the abundance and distribution of yellow-breasted chat in the Planning Area to contribute to its conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.5.

**Objective YBCH1.1:** Increase the extent of yellow-breasted chat nesting habitat within the Planning Area.

## Giant Garter Snake

**Goal GIGS1:** Provide sufficient habitat to support the abundance and distribution of giant garter snake populations in the Planning Area to contribute to its conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3.

**Objective GIGS1.1:** Increase the extent of tidal giant garter snake habitat within the Planning Area.

**Objective GIGS1.2:** Maintain or increase the extent of protected non-tidal giant garter snake habitat within the Planning Area and Suisun Marsh.

## Western Spadefoot Toad

**Goal SPTO1:** Provide sufficient habitat to support the abundance and distribution of western spadefoot toad in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3.

**Objective SPTO1.1:** Maintain or increase the extent of protected western spadefoot toad breeding and upland habitats within the Planning Area and Suisun Marsh.

## Valley Elderberry Longhorn Beetle

**Goal VELB1:** Provide sufficient habitat to support the abundance and distribution of valley elderberry longhorn beetle in the Planning Area to contribute to its conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.5.

**Objective VELB1.1:** Increase the extent of valley elderberry longhorn beetle habitat within the Planning Area.

## **Fairy Shrimp (Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp, Conservancy Fairy Shrimp, and Longhorn Fairy Shrimp)**

**Goal FASH1:** Provide sufficient vernal pool habitats to support the abundance and distribution of vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, and longhorn fairy shrimp populations in the Planning Area to contribute to their conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3.

**Objective VPFS1.1:** Maintain or increase the extent of protected vernal pool habitats that support habitats for vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, and longhorn fairy shrimp within the Planning Area.

## **Alkali milk-vetch**

**Goal ALMV 1:** Provide sufficient vernal pool, vernal swale, alkali meadow, and alkali sink habitats to support the abundance and distribution of alkali milk-vetch in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3-1.4.

**Objective ALMV1.1:** Maintain or increase the extent of protected vernal pool, vernal swale, alkali meadow, and alkali sink habitats that supports alkali milk-vetch habitat within the Planning Area and Suisun Marsh.

## **Delta Button-Celery**

**Goal DEBC1:** Provide sufficient seasonal floodplain habitat to support the abundance and distribution of delta button-celery in the Planning Area to contribute to its conservation.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.2.

**Objective DEBC1.1:** Maintain or increase the extent of protected seasonal floodplain habitats that support habitat for delta button-celery within the Planning Area.

## Delta Mudwort

**Goal DEMW1:** Provide sufficient habitat to support the abundance and distribution of delta mudwort in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.5.

**Objective DEMW1.1:** Increase the extent of delta mudwort habitat within the Planning Area and Suisun Marsh.

## Delta Tule Pea

**Goal DETP1:** Provide sufficient habitat to support the abundance and distribution of delta tule pea in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.5.

**Objective DETP1.1:** Increase the extent of delta tule pea habitat within the Planning Area and Suisun Marsh.

## Heckard's Peppergrass

**Goal HEPE 1:** Provide sufficient vernal pool, vernal swale, alkali meadow, and alkali sink habitats to support the abundance and distribution of Heckard's peppergrass in the Planning Area to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3.



**Objective HEPE1.1:** Maintain or increase the extent of protected vernal pool, vernal swale, alkali meadow, and alkali sink habitats that support Heckard's peppergrass habitat within the Planning Area.

## Legenere

**Goal LELI1:** Provide sufficient vernal pool and vernal swale habitats to support the abundance and distribution of legenere in the Planning Area to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3.

**Objective LELI1.1:** Maintain or increase the extent of protected vernal pool and vernal swale habitats that supports legenere habitat within the Planning Area.

## Mason's Lilaeopsis

**Goal MALI1:** Provide sufficient habitat to support the abundance and distribution of delta mudwort in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.5.

**Objective MALI1.1:** Increase the extent of Mason's lilaeopsis habitat within the Planning Area and Suisun Marsh.

## San Joaquin Spearscale

**Goal SJSP1:** Provide sufficient vernal pool, alkali meadow, alkali sink, and brackish tidal marsh habitats to support the abundance and distribution of San Joaquin spearscale in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: NACO1.3.

**Objective SJSP1.1:** Maintain or increase the extent of protected vernal pool, alkali meadow, alkali sink, and brackish tidal marsh habitats that supports San Joaquin spearscale habitat within the Planning Area and Suisun Marsh.

## Soft Bird's-Beak

**Goal SOBB1:** Preserve and protect the abundance and distribution of soft bird's-beak and provide sufficient brackish tidal marsh habitat to support the abundance and distribution of soft bird's-beak in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.4.

**Objective SOBB1.1:** Increase the extent of brackish tidal marsh habitats that could support soft bird's beak habitat.

**Objective SOBB1.2:** Avoid take of soft bird's beak associated with implementation of covered activities and conservation measures.

## Suisun Marsh aster

**Goal SUMA1:** Provide sufficient habitat to support the abundance and distribution of Suisun marsh aster in the Planning Area and Suisun Marsh to contribute to its conservation in these areas.

The following ecosystem and natural community objectives also contribute towards achieving this goal: ECSY5.2 and NACO1.3-1.5.

**Objective SUMA1.1** Increase the extent of Suisun marsh aster habitat within the Planning Area and Suisun Marsh.